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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,542	01/14/2000	G. Douglas Antuma	SLU02P-303	8523

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EXAMINER

FERRIS III, FRED O

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 01/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PN

FN

Office Action Summary

Application No.

09/483,542

Applicant(s)

ANTUMA, G. DOUGLAS

Examiner

Fred Ferris

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. *Claims 1-26 have been presented for examination. Claims 1-26 have been rejected by the examiner.*

Drawings

2. *This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.*

Figures 1A-1D should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. Figures 1A-1D show a roof truss but the claimed invention is not a roof truss.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. ***Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to***

enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, independent claims 1, 10, and 16 each recite limitations relating to a method, system, and computer code for volume detailing that includes the steps of; providing a three dimensional volume, positioning a three dimensional component, and sectioning the three dimensional volume, but does not provide a technique, algorithm, or sufficient description of how any of these steps are accomplished. The specification does not specifically disclose how a three dimensional volume is provided, how a three dimensional component is positioned, or how the three dimensional volume is sectioned, sufficient to allow one skilled in the art to make and/or use the invention. While the disclosure has stated on page 5 that "the present invention uses a plurality of LISP modules that customize an AutoCAD 2000" no algorithms or computer listing are disclosed that specifically show how a three dimensional volume is provided, how a three dimensional component is positioned, or how the three dimensional volume is sectioned by these LISP modules. Applicants' are reminded that they have claimed the method, computer code, and system for these limitations. Dependent claims inherit this defect.

While the specification for the claimed invention is delinquent in areas previously cited under 112(2) rejections, the examiner has made the following prior art rejections based on the limited scope of information provided by the disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent 5,740,341 issued to Oota et al.

Regarding independent claims 1, 10, and 19: Oota teaches a CAD system for detailing a ***building structure*** that allows design and ***placement*** and routing of ***three-***

dimensional structural components (including volume) such as piping and air conditioning **ducts** and considers **obstructions** with building structural bodies (trusses etc.) extending through a **point of interest**. (Abstract, Summary of Invention, CL2-L22-55, CL13-L55, CL15-L43, CL20-L31, CL27-L50, Figs. 5-11, 13-18, 20-21, 25-27, 32-35)

At column 2, line 22 Oota recites:

"In a preferred embodiment of the present invention, the three-dimensional space mapping means has a means of laying out and displaying a plurality of components on the preset plane in a three-dimensional arrangement space in which these components are to be laid out in keeping the interconnections. In arrangement display, it is preferable to display a specific component in a three-dimensional display way according to its attribute information such as the specification, shape, material, etc. of the component."

Per dependent claims 2-9, 11-18, and 20-26: Oota considers component **interference checking** (CL10-L23), **predetermined shapes** (CL11-L45, Fig. 8), **structural bodies** (trusses, catwalks, etc. – CL15-L43), **surfaces** (outer, top, etc. – CL13-L55), component **volume computation** (CL27-L50), and **air conditioning ducts** (CL31-1).

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent 5,227,983 issued to Cox et al.

Regarding independent claims 1, 10, and 19: Cox teaches a CAD method, system, and computer code, for designing and routing a building **distribution system** (sprinkler system plumbing) consisting of elements (components) representing HVAC **duct work**, piping, conduits, etc. and considers multiple **dimensions, obstructions,**

*and **building element** size (volume and segments). (Abstract, Summary of Invention, CL2-L57-CL3-30, CL4-L50-66, CL7-L41-CL8-L9, CL17-L8-L55, Figs. 1-4, 10)*

At column 2, line 57 Cox recites:

*"The invention is a method and apparatus for designing a **distribution system for a building**. The distribution system can be any system used in a building including plumbing, electrical, sprinkling, **ventilating and related systems** or any combination of such systems. Information about the distribution system elements and various standard requirements is stored into a memory of a computer. Information about the building elements and **adjuncts including location of walls and similar obstructions are entered into a computer**. These building elements and adjuncts are then stored in the memory of the computer. The user also selects the particular standard which is applicable to the building being constructed."*

*Per dependent claims 2-9, 11-18, and 20-26: Cox further considers component **interference checking** (CL4-L51), **component shapes** (fig. 5), **structural bodies** (building elements – CL7-42), **surfaces** (outer, top - CL7-42), and **air conditioning ducts** (CL17-L8-L55).*

Conclusion

5. *The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.*

U.S. Patent 5,557,537 issued to Norman et al teaches CAD design of three-dimensional building distribution systems.

U.S. Patent 4,551,810 issued to Levine teaches CAD-CAM design of building conduit and duct networks.

Art Unit: 2123

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 703-305-9670 and whose normal working hours are 8:30am to 5:00pm Monday to Friday.

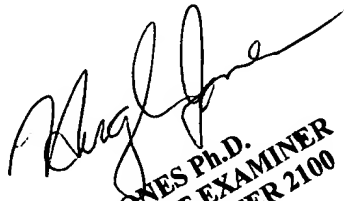
Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 703-305-3900.

The Official Fax Numbers are:

After-final	(703) 746-7238
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January 8, 2003


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